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# agricultural marketing

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U. S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

EGGS FOR BREAKFAST

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August 1960

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## Cover page

This family believes in having a hearty breakfast to start off its day's activities. They've already finished their fruit juice and, while the youngsters dig into a bowl of cereal, Dad gets ready to eat his fried eggs and bacon. The rest of the family prefers its eggs boiled—and Mom has them ready and waiting. According to a consumer preference study recently completed by the Agricultural Marketing Service, most people think of eggs as the "most healthful" of breakfast foods. Yet, only 3 out of 5 usually eat them for breakfast. Why not? The story on page 3 tells you the reasons.

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*Most homemakers interviewed in a nationwide AMS survey believe a "good" morning meal should include*

# EGGS FOR BREAKFAST

"People who eat a good breakfast have a better chance to do a day's work well than those who neglect breakfast," USDA nutritionists say. And that goes for everybody—homemakers, weight watchers, and teen-age girls as well as manual laborers.

There's no hard-and-fast rule about how big a "good" breakfast should be. But most homemakers interviewed in a nationwide Agricultural Marketing Service consumer survey believe it includes eggs. In the minds of most of these homemakers, eggs mean good health. In fact, they rated eggs as the most healthful of the more usual breakfast foods.

Yet, the AMS survey, which was made to assist producers and marketing men sell more eggs, found that *only 3 out of 5 people eat eggs regularly* for breakfast.

Why? Are they too rushed, or do they feel they can't afford it?

These were not the reasons "why" for most of the homemakers. Few of them said they felt eggs were particularly hard to prepare. In fact, for most women they were "quick and easy" to fix.

Nor did most homemakers consider price an obstacle. Lower income families actually showed higher levels of egg use than families in higher income brackets.

And it was mainly younger people who found themselves "too busy" to eat eggs for breakfast.

Also, contrary to the opinion of some people in the industry, few

people omit eggs from their breakfast menus because they feel eggs will harm their heart or circulatory system. Some older people did give health as a reason, but usually because they felt eggs aggravated an allergy or some digestive problems.

The main reason given by homemakers for some member of their family not eating eggs for breakfast was that he or she did not like them. But this situation may have been the same in 1945 when egg consumption was at an alltime high of 402 eggs per person as it is during this year when we are consuming eggs at a rate estimated by AMS economists at 325 per person.

Producers and marketing men may find an answer to expanding the market for eggs in the homemaker and in her opinions about who needs a good breakfast and who doesn't.

The survey showed that most women know that hard-working men and active teen-agers should have a hearty breakfast. But they aren't so sure about other people.

When shown pictures of nine different types of people—two students (boy and girl), an elderly man and woman, a young working man, a young housewife, a young female office worker, middle-aged business executive, and a male schoolteacher—most of the homemakers said *only* the laborer and the male student *should* have a big breakfast—which would probably include eggs.

They apparently did not feel that they themselves and most members of their families need a large or

*(continued on page 16)*



Interviewers find most people think that a "large or substantial" breakfast should include two eggs. A "medium" breakfast one egg; a "small or light" breakfast generally does not have any eggs at all.

The survey discussed in this article is "Homemakers' Use of and Opinions About Eggs." A copy of the full report can be obtained from the Marketing Information Division, AMS, U. S. Department of Agriculture, Washington 25, D. C. Miss Margaret Weidenhamer of the Market Development Research Division of AMS was project director for the study.



*AMS analyzes cost of*

# CONTAINERS FOR SCHOOL MILK

**N**EARLY 80,000 U. S. schools under the Federal School Lunch and Special Milk Program served 4.5 billion half pints of milk during the 1959-60 school year.

If only 10 percent of these schools were to switch to containers costing perhaps a half cent less per serving, savings of more than \$2 million per year would be possible.

This is the conclusion reached by Agricultural Marketing Service researchers who recently compared the packaging costs of four types of milk containers—the conventional half-pint cartons now in use, glass bottles, the newly-developed pyramid-shaped cartons, and 5-gallon cans with dispensers.

Among the cartons, the leading money-saver turned out to be the pyramid or tetrahedron. Packaging costs for the “tetra” ran from \$3.50 to \$5 less per thousand than for conventional half-pint cartons. The tetra cost less than one glass bottle operation observed, and more than another.

Packaging costs of 5-gallon dispenser cans ranged from \$5 to \$9 less per 1,000 equivalent half pints

than regular paper milk cartons.

Possibly guided by convention rather than by the adding machine, dairies sold bulk milk in cans at prices lower than seemed compatible with in-plant savings. All five dairies, whose can operations were studied by AMS researchers, priced bulk milk to schools from \$10 to \$18 (per 1,000 equivalent half pints) below milk in paper cartons.

In consequence, all the schools reported they were able to buy the necessary dispenser units, glasses and washers from their savings.

The new cartons and dispenser cans, however, have not been without their problems.

Milk in cans must be drawn into glasses for serving. Filling, handling, washing, and returning the glasses to the dispenser requires up to 25 percent of the cafeteria labor force.

Student helpers do most of this work in return for free meals, and these cost the school very little. But in a commercial cafeteria, the cost of this operation runs almost a cent a glass.

Use of bulk cans also makes precise ordering impossible. Milk has to be taken in units of 5 gallons—or 80 half pints. Thus, a cafeteria manager who needs at least 275 half pints must order 320.

The problems facing the tetras exist mainly at the dairy. Unlike the conventional carton machines, the tetra model which forms and fills half-pint containers for school use cannot switch to other sizes to supply other outlets.

And, more than one dairy has reported an occasional batch of leaking containers with a consequent loss of business. These “leakers,” however, were said to be the result of inexperience in the making and handling of the paper in the early months of development in this country. There have been no recent reports of a leakage problem.

Because of their unusual shape, the tetra cartons were difficult to sell unless price concessions were granted. Although savings justified price cuts, local laws or market conditions have sometimes made such action impossible or infeasible.

Children, though, were intrigued by the unique shape of the tetra cartons. In many schools, milk consumption increased when the new containers were introduced. But usually, after the novelty wore off, consumption slipped back to the old level.

One definite advantage offered to the school using tetra cartons is their light weight. It is far easier

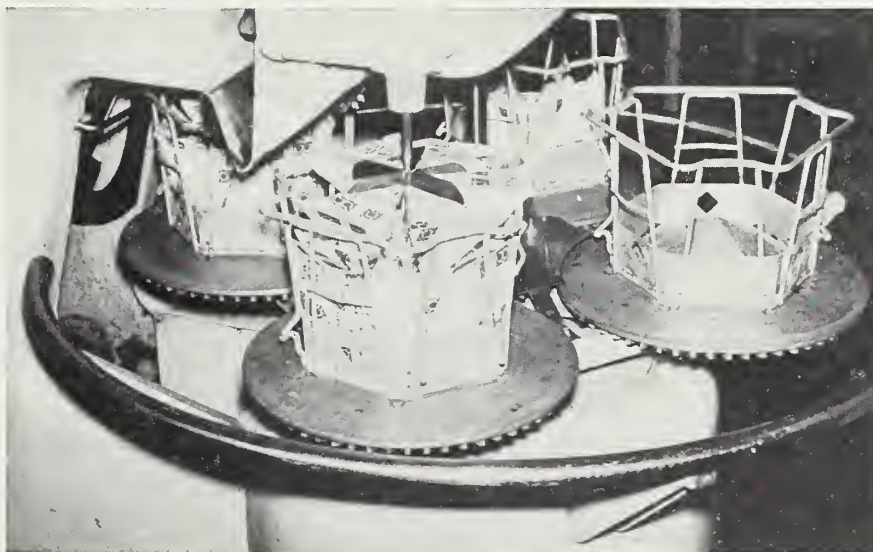
This article is based on a marketing research report recently published by the Transportation and Facilities Research Division of AMS. The publication, authored by Goodloe Barry and Thomas D. Rainbold, may be obtained from the Office of Information, U.S. Department of Agriculture, Washington 25, D.C. Ask for MRR-407.

This is how the tetra carton is made. As column of paper moves through machine, milk flows in. Individual cartons are cut off, first from the sides, then from front-rear.



Delivery men find tetras in wire baskets easy to handle. Empty cases can be nested. A stack of 10 full cases is 62 inches high; 20 empties will fit in the same space.

Machine discharges the filled tetrahedrons and puts them in handling cases. One man can tend tetra machine; other operations require two men.



to handle 18 tetra cartons in their compact carrying case than 20 to 24 much heavier bottles or the 48 to 66 conventional cartons ordinarily packed in a single case.

The lightweight construction of the tetra cartons makes them easily disposable. Empties can be squashed flat in the trash barrels and thus save space. The same light construction, however, gives the carton about the same characteristics as a water pistol when mischievously given a sharp squeeze.

Dairy plants also can gain by in-

stalling a tetra operation. In addition to certain direct cost advantages, the tetra machine is simple in design, has few moving parts, and is relatively easy to operate, clean and maintain. With an efficient, automatic packout, the machine operation is a light task for a single worker. (All comparable operations observed required two men.)

The tetra operation saves space in the plant. The machine is relatively compact. Enough paper to make 1,000 cartons occupies but  $\frac{1}{3}$  cubic foot, and the problem of

storing empty cases is minimized because they nest.

For both the dairy and the school tetra containers offer utility as well as economy. How well they will be accepted remains to be seen.

Research such as this—into the various methods of packaging and dispensing milk—can serve as a useful guide toward improving the efficiency of the milk marketing system. It can also help producers expand their market for milk not only within the schools, but in restaurants, commercial cafeterias, and snack bars.



A low cost marketing tool . . .

## USDA CONSUMER GRADES

by Eleanor Ferris



USDA consumer grades are a low-cost and effective marketing aid for many food products.

Standards on which these grades are based are developed by the Agricultural Marketing Service. This agency also provides grading services, often in cooperation with State departments of agriculture.

The use of these grades and grade marks is entirely voluntary. Those requesting grading services must pay for them, but charges are low for the value received. The cost of meat grading, for instance, figures out to only a fraction of a cent per pound.

Many processors employ USDA grading services as an aid to quality control and plant sanitation. All officially graded products must be handled in a sanitary manner.

The USDA grade shield on a food package provides consumers with a uniform quality guide—particularly important today when so many products are on the market. Because Government graders are employed by an impartial agency and are centrally trained and supervised, their grading work is as nearly accurate and consistent from one section of the country to another as is humanly possible.

USDA consumer grades have been developed for meat, poultry, eggs, dairy products, canned, frozen, and dried fruits and vegetables, and a few fresh fruits and vegetables. Most of these grades, except those for meat, are designated by letters—U.S. Grade A, B, or C. The shield-shaped mark used to enclose the grade rating differs slightly for each commodity.

Consumer grades, however, should not be confused with wholesale grades. The consumer grades appear only on retail-size units, while wholesale grades are designed for comparatively large shipments. Also, wholesale grades

allow a certain tolerance for undergrade items.

Meat grades, again, are the exception. In meat grading, each unit—that is, the carcass or wholesale cut—is graded. Grade marks are rolled over the entire piece so that one or more will appear on practically all retail cuts.

Work is constantly under way to improve the grades currently in use and to develop new ones when these are needed.

About a year ago, for instance, a new grade was put into effect to identify high-quality eggs handled under a USDA quality control program. This new grade, "Fresh Fancy Quality," provides an additional assurance of freshness and has proved extremely popular with consumers wherever it has been put on the market.

New grade standards have been issued recently for a number of processed fruits and vegetables—both new products and others that have lately come into popular usage. These include frozen french fried potatoes, frozen french fried onion rings, chilled orange juice, canned grapes, and low-moisture dehydrated apricots, peaches, and prunes.

Buying graded foods, of course, does not necessarily imply buying only the best. Grades are designed to identify the range of available qualities so the shopper can pick the one most suited to his use.

Often consumers need to be reminded that lower grades provide good wholesome food, uniquely suited to some purposes, and usually at a saving. Grade B eggs, for example, are fine for baking and combining with other foods.

A booklet for food shoppers describing all of the USDA consumer grades and suggesting suitable uses for many of them is available free from the Office of Information, U.S. Department of Agriculture, Washington 25, D. C.

The author is an information specialist in the Marketing Information Division, AMS.

*A shift in its display location and a little promotion helped boost purchases of this specialty item.*

## MARKETING ARTIFICIALLY SWEETENED GRAPEFRUIT JUICE

*by Michael G. Van Dress*



Taste samples of artificially sweetened grapefruit juice were given out in some supermarkets as part of promotion. Sales rose in response.

**U**P FRONT and in the ranks—that's the place for artificially sweetened grapefruit juice.

So say researchers of the Agricultural Marketing Service who saw sales rise markedly when artificially sweetened juice was added to the regular grapefruit juice section of 30 Indiana supermarkets.

When available, artificially sweetened grapefruit juice is usually sold in small cans on the dietetic shelf. Citrus growers and processors and AMS researchers wondered whether it might not sell better in standard 46-ounce cans featured in the same display as regular grapefruit juice.

The researchers found that it could. Total sales of grapefruit juice rose more than 300 percent during a 3-week promotion period. And, artificially sweetened juice outsold regular grapefruit juice almost 4 to 1.

After the promotion, total sales settled down at 53 percent more than before the experiment began.

The test was conducted in 30 stores in Fort Wayne, Ind. To introduce the artificially sweetened

grapefruit juice to the consumer, posters and sales aids were distributed to the stores.

Free taste samples were offered to customers in selected supermarkets. In these stores, artificially sweetened juice sold much faster than in supermarkets where samples were not given out.

In no case, however, did sales of artificially sweetened juice appear to reduce purchases of sugar-sweetened grapefruit juice. Regularly sweetened juice continued to sell at about the same rate during, as before, the promotion and introduction of the artificially sweetened product.

Sales of unsweetened grapefruit juice, on the other hand, did fall off somewhat during the test. And they proceeded at a still lower level after the promotion of artificially sweetened juice.

Market analysts, however, doubt that this decrease in sales came as a result of the more direct competition of artificially sweetened juice. Many of the stores had only a small supply of unsweetened juice on hand—or were out of it entirely—during the test period. Also, the unsweetened juice often was priced higher than its com-

petitors and this, of course, could have been part of the reason sales dropped off.

Nearly all of the people who bought the large-size cans of artificially sweetened grapefruit juice were completely satisfied with the product and intended to buy it again.

When homemakers were asked "What did you think of it?" most of the favorable replies referred to the flavor of the product. Only 1 in 5 mentioned the artificial sweetness as a reason for satisfaction with the product—though about a third of the homemakers and their family members were classified as overweight or were concerned with this problem or both.

As a result of the promotion of the test juice, 40 percent of Fort Wayne homemakers knew the product was available in stores. Of these, only 3 in 10 were able to identify correctly the specific characteristic that made the test juice different from other canned grapefruit juices.

Fort Wayne homemakers, for the most part, said they liked artificially sweetened grapefruit juice. So far, sales records have borne this out.

The author is a staff member of the Market Development Research Division of AMS. A copy of the full study will be published by the Agricultural Marketing Service in the near future.



Edward St. Clair serves as milk market administrator for Washington area. His office is located in Arlington, Va.

by Glenn W. Freemyer

*He determines milk prices, checks books, enforces regulations under Federal orders.*

# THE JOB OF THE MILK MARKET

**I**N BOSTON, New York, Seattle, and 77 other cities across the country, Federal milk market administrators see to it that the requirements of the Federal milk orders are observed.

The job requires the astuteness of a judge, the exactness of an accountant, and the technical knowledge of a chemist. For, the market administrator carries out all phases of the Federal milk marketing orders. He determines prices, checks handlers' accounts, and verifies weights and butterfat content. He also sees to it that whatever the orders provide is carried through into practice.

And, though the job is a big one and gives him a lot of authority, it has been bestowed upon him by those he regulates—in this case, the farmer and the handler. Milk orders are issued only upon the request of interested groups and only after a public hearing is held and all sides have had a chance to air their views.

Once the order is issued, it has the force and effect of law. The market administrator carries out its terms.

Milk orders are designed to regulate the handling of milk distributed in a defined marketing area. They set minimum prices which handlers (bottlers) who distribute milk must pay producers.

One of the administrator's jobs is to compute and announce each month the minimum "blend" price. This is how it's done. The order generally establishes two "classes" for milk, depending upon the use to which it is put. Milk distributed in fluid form is designated as Class I; that not getting into

fluid use but diverted to manufactured dairy products is termed Class II.

The order sets a minimum price (per hundredweight) for each class. The "blend" price is an average of these two values as applied to the overall usage of the milk. This means farmers get the same price regardless of the use to which their milk is put, and all handlers pay at the same price level, according to the way they use the milk.

To show, in simplified form, how this works—take three handlers, A, B, and C. Say, each receives 200 pounds of milk during the month. A sells all of his as Class I (for fluid use) for which the order value is \$5 per hundredweight. This would make the value of his milk \$10. B sells all of his milk as Class II (for manufacturing) for which the order value is \$3 per hundredweight. So, his milk is worth \$6. C sells 100 pounds as Class I and 100 pounds as Class II, making his milk worth \$8.

When the market administrator gets the reports of the handlers, he adds up the total amount received—600 pounds—and the total values—\$24. Then, he figures the average or "blend" price per hundredweight—\$4. This is the minimum price each of the handlers can pay his producers.

In this case, each would owe his producers \$8 per 200 pounds. But A had milk worth \$10, so he must pay his extra \$2 into the pool. (Actually, he remits to the market administrator.) However, B's milk was worth only \$6, so he is paid \$2 from the pool. C came out even. He neither pays nor draws from the pool.

(The price the farmer receives is adjusted, however, on the basis of the butterfat content of his

The author is Chief, Order Operation Branch, Dairy Division, Agricultural Marketing Service.

More than 190,000 farmers deliver 40 billion pounds of milk annually under Federal orders.

Records of amounts of milk received by handlers are kept for administrator.

Licensed tester runs check to measure butterfat content.



# ADMINISTRATOR

milk and transportation costs.)

The milk market administrator's schedule of operation for a month might go something like this:

- On the 5th day of the month, he announces class prices. The administrator computes the Class I price by a formula which is written into the order. Class II prices to handlers are usually based on the price of manufacturing milk or certain dairy products.

- By the 8th, handlers must submit reports on their receipts and utilization of milk during the previous month. These are given a quick check for mathematical accuracy and general correctness. Later they will be verified by an audit of the handlers' books and records.

- On the 10th of the month, the administrator announces the uniform price which is the minimum handlers must pay producers.

- By the 12th, handlers pay to the administrator whatever pool payment they owe.

- By the 13th, the administrator pays the handlers the pool payments due them.

- By the 15th, handlers pay their producers.

- By the 20th, handlers submit a copy of their producer payrolls to the market administrator.

The administrator employs a staff of auditors to carefully check the books of each of the handlers under his jurisdiction. The size of this staff varies with the number of handlers.

The market administrator's staff also checks into the accuracy of the weights and tests of milk made by handlers. In this way, producers are assured that they receive payment for the correct amount

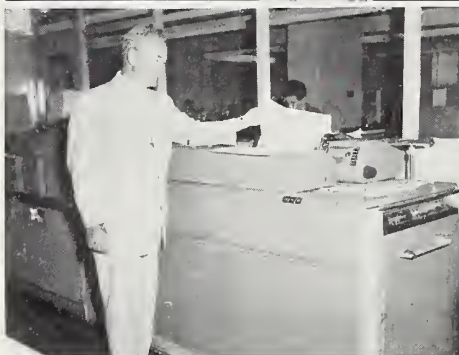
(continued on page 16)



"Ferris wheel file" holds the complete records of some 50,000 dairy farmers.



High speed calculators do many statistical chores in office of N.Y. administrator.



Tabulator lists individual items, calculates and gives accumulated dairy figures.



Staff of researchers gather statistical data for use in hearings on Federal orders.



## A Complex Job

# ESTIMATING FRESH VEGETABLE CROPS

by Reginald Royston

**P**RODUCING vegetables and getting them to market is about as complex an undertaking as any in agriculture. And, because of this, the job of reporting the progress of production is also complicated.

*Production areas are wide-flung*—vegetables are grown for fresh use on commercial scale in all but six States.

*There are many kinds of vegetable and melon crops*—24 of national importance.

*Crops have short periods of maturity*, and this means continuous appraisals of their development.

*Harvest goes on in some parts of the country every month.*

*And, finally, the crops are perishable* and must be marketed as soon as harvested.

Keeping abreast of developments from season to season, area to area, and crop by crop is no easy job. Yet it's being done by the Crop Reporting Service of the Agricultural Marketing Service.

The AMS program focuses mainly on the supply situation for seasonal periods of 1½ to 3 months.

Facts and figures are provided on acreage, yield per acre, and prospective production during the growing and harvesting season.

Fresh vegetable reports, giving acreages and the prospective production during the growing and harvesting season, are issued about the 10th of each month. These list the volume of vegetable production by States, for the full season, without attempting to show the rate of harvest and the portion of the season's crop remaining.

In addition, there are several special surveys and reports that are issued weekly, at 10-day intervals, and by the month. These are State reports and list planted acreage—for celery and tomatoes in Florida, and carrots and lettuce in the Salinas Valley of California.

Information for these reports, as well as the overall fresh vegetable reports, comes from growers who fill out mailed questionnaires, and from shippers, seedsmen, and others. It is supplemented by field contacts by trained crop estimators.

Collected and compiled, this information helps marketing men

gage potential supply and gives growers some idea of their competition.

As far as the program goes, it's a useful one. But to keep pace with the demands of highly specialized production and the rapidly changing system of marketings, there is need for more current information on production and supply.

Supplies of leading winter, spring, summer, and fall vegetables should be further pinpointed, with emphasis on estimating the rate of harvest and the flow to market. There also is need for quick exchange between States of pertinent information on growing conditions, acreage, and supplies of various vegetables in competing areas.

Vegetable growers, as well as those who serve them, want and need timely and accurate facts to help them decide what and how much to plant, when to plan for harvest, and where to market their crops. The Crop Reporting Service constantly studies these needs, reviews its methods, and works to improve its statistical program on vegetables.

The author is Chief of the Fruit and Vegetable Statistics Branch of Agricultural Marketing Service.

# A RATING METHOD FOR REFRIGERATED TRUCKS HAULING PERISHABLE FOODS

THE heat transfer rate of a refrigerated truck-trailer body is an important factor in determining its acceptability for moving frozen and fresh foods. The purpose of the insulated body is to reduce the movement of heat from outside to the cold interior.

But, up to now, there has been no reliable way to measure how well the trailer is performing. It has been impossible to gage the true heat transfer rate of the trailer body.

Researchers from the National Bureau of Standards and the Transportation and Facilities Research Division of AMS recently developed a method of determining the heat transfer rate.

Already adopted by the Truck-Trailer Manufacturers Association, it also serves to pinpoint trouble spots or areas where construction and design could be improved.

Knowing the heat transfer rate of his trailer the trucker can select the correct size of cooling equipment. This proper combination of equipment enables the trucker to give farmers greater assurance that their products will get to market in better shape and with less loss.

Tests for this study were made in the laboratories of the National Bureau of Standards and compared with actual runs along the Ohio Turnpike.

The researchers found, among other things, that as a truck moves down the road at 50 miles per hour the air leakage into the trailer walls increases the cooling load

The research report on which this article is based was prepared by specialists in the National Bureau of Standards and the Transportation and Facilities Research Division of AMS. The authors are: C. W. Phillips, W. F. Goddard, and P. R. Achenbach of NBS, and H. D. Johnson and R. W. Penney of USDA.

from 10 to 27 percent. In the four trailers tested, this leakage varied from 660 to 1,475 cubic feet per hour. Obviously, several of the trailers had too much leakage and probably all could stand to be tightened up some.

Road heat was another problem. This, it developed, was due chiefly to the exhaust from the trailer engine. It sometimes caused the underside of the trailer to heat as much as 15 degrees more than the rest of the body.

Still a third problem—and a big one to the trucker as well as the processor and grower—is the amount of frost that accumulates in the trailer walls and on the cooling coil. As the frost builds up, so does the weight of the trailer.

Tests showed an increase of one-half to one pound an hour in trailer

weight due to frost. Over a period of months, this could amount to a thousand pounds or more.

As for the new method of testing—it utilizes the "heat sink" principle. This is the way it works:

The trailer is cooled to 0°F., and the test room held at 100° F. with 50 percent relative humidity.

A brine is circulated through the cooling coils inside the trailer and through an electrically heated brine heater outside the trailer. The heat gain of the trailer is then calculated by comparing the amount of heat added to the brine in the trailer and in the heater.

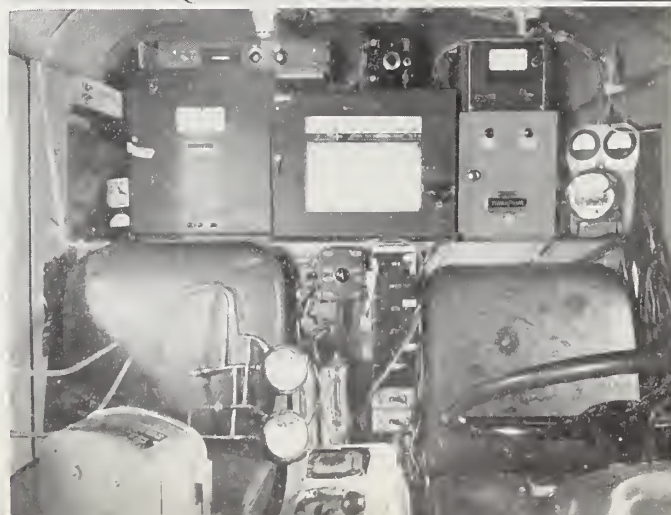
To figure this out:—Multiply the heat added to the brine heater by the ratio of the rise in brine temperature in the trailer compared to the rise in temperature of the brine in the heater. Then, subtract the amount of heat introduced in the trailer by the auxiliary equipment (blower, fans, and space heater).

For more details and a full account of the tests that developed this rating method, see "A Rating Method for Refrigerated Trailer Bodies Hauling Perishable Foods," an AMS publication.

Vehicles were tested in this shed at the National Bureau of Standards.



Trucks traveling the Ohio Turnpike were equipped with gages and meters to record heat penetration.



# PAC Act Tuned to Modern Trading Practices



**A** MILESTONE in the colorful history of produce marketing was reached August first.

On that date, a fresh modern look was applied to the Perishable Agricultural Commodities Act, as new regulations went into effect for enforcement of this unique law.

The changes made in the PACA regulations tailor them more precisely to modern trading conditions. Special sections have been provided, for example, to deal with such produce traders as shippers, terminal market receivers, brokers, commission merchants, retailers and growers' agents.

The grower's agent is defined as a type of commission merchant who operates in producing areas. The new regulations require him to give each of his growers a written statement of the terms under which he is handling their produce. He is not allowed to purchase produce which he handles for others, and he cannot deal with firms which he controls without prior approval of the grower.

The section on shippers in the new regulations explains the varying requirements for those shippers who purchase produce and for those who ship on "joint account" basis with growers.

Several changes have been made in the "trade terms and definitions" section of the regulations—the part that establishes standard definitions for words and phrases

in common use in the produce business. Such expressions in the language of marketing as "cash sale," "purchase after inspection," "joint account—split above" and many more are defined precisely. Then, when a trader uses these "shorthand" terms in a contract, the PACA regulations provide an exact definition of just what the terms mean and therefore what's legally enforceable.

The term "cash sale," for example, is a new addition; when used in a contract, it means that payment must be made within 24 hours after acceptance of a shipment. The new regulations set forth specific time periods within which payment must be made under various types of transactions, unless some other time period is specifically agreed on.

All the changes made in this "trade terms and definitions" section serve solely to clarify the rights and responsibilities of the contracting parties.

Other provisions in the new regulations spell out further the details of the code of fair trading practices that the PAC Act establishes for the marketing of fresh and frozen fruits and vegetables.

In establishing such a code and providing authority to enforce terms of contracts between produce traders, the PAC Act holds a unique place among Federal statutes. Unusual though it is, the

law is exactly what the fruit and vegetable industry asked for in the first place, and what it continues to ask for.

PACA's broad authority had its basis 30 years ago when the statute was enacted at the initiation and with the support of the fruit and vegetable trade. The industry wanted a code to regulate trading practices of its members. And, to make such a code effective, the industry wanted USDA to be given authority to act as an administrative court—to be empowered to cooperate in working out settlements with parties involved in contractual disputes and to issue reparation orders requiring payment of damages when it found there had been an unjustified breach of a contract.

The PAC Act gave USDA this authority; the system has worked well; and the produce industry continues to support its principles strongly. But the ways in which fruits and vegetables are marketed have changed sharply through the years. So, while basic provisions of PACA continue to be sound, some streamlining has appeared desirable in the detailed regulations for its enforcement.

Four years ago, active study of the PACA regulations got under way to bring them abreast of these marketing changes. Two years ago, the PACA Conference Group was set up to work with officials of the Agricultural Marketing Service

*(continued on page 16)*

*by G. R. Grange*

The author is Deputy Director of the Fruit and Vegetable Division, Agricultural Marketing Service.

*First time United States exhibit  
at international trade fair has  
been devoted to one commodity.*

## U.S. COTTON GOES TO **SPAIN**

*by Lance G. Hooks*

**F**OR THREE full weeks in June, cotton was king—in Spain!

It was the one and only product featured at the U.S. pavilion of the 28th International Trade Fair in Barcelona. And everyone who visited the exhibit saw and heard of nothing else.

People watched with fascination as Spanish boys and girls modeled cotton fashions . . . as rows of girls at sewing machines, step-by-step, produced cotton shirts . . . as a technicolor movie about cotton flickered across the screen of a theater.

These were the highlights of the U.S. exhibition. It was the first time an entire exhibit had been devoted to a single commodity.

Most popular attraction of the fair was the "Cotton-teen" style show presented in cooperation with the Spanish Cotton Textile Industry. It featured skits by Barcelona boys and girls, 9 to 19 years old, who modeled the latest in American cotton clothes—for work, for play, and for formal occasions.

Another unique exhibit in the U.S. pavilion was a demonstration of the mass production of men's cotton shirts. Fair visitors watched skilled girls perform each of the dozen machine operations necessary in making a shirt.

Because much of the clothing worn in Spain is still made at home or by local dressmakers and tailors, this exhibit drew especially large crowds. It showed the economy of mass production.

Economy also was the keynote of the exhibit which showed the smart clothes that can be made from cotton feed sacks. While not a new idea in this country, this possibility has not been explored extensively by the people of Spain.

The Barcelona exhibition, like most other American trade shows abroad, was financed with foreign currencies accruing to the U.S. from sales of surplus agricultural commodities. It is part of the U.S. Department of Agriculture's program to promote markets for U.S. farm products in foreign countries.

Spain is an important market for American cotton. During the past 5 years, it has imported more than a million bales from the United States. During June—the month of the fair—negotiations were completed for another 150,000 bales.

The author, a staff member of the Marketing Information Division of AMS, was Director of Information for the cotton exhibit.



Young people from Barcelona, none of whom were models by profession, staged continuous style show of latest fashions created from American cotton. This proved the most popular attraction at U.S. exhibition.

Crowd gathers to observe demonstration of improved chemical treatment of cotton fabrics. The U.S. exhibition at Barcelona also featured cotton's uses in the home, in industry, in teen fashions.



U.S. Maid of Cotton watches mass production of shirts.



California plum producers can reduce their packaging costs by bulk-filling fiberboard cartons instead of place-packing in crates. Other savings are possible by increasing size of operations, hours per season.

Industry could save \$180,000 a year by bringing individual packaging operations together in larger plants, and another \$160,000 could be made by increasing pack-out season.

# WAYS TO REDUCE PLUM PACKING COSTS

*Following AMS recommendations  
could save industry \$1,400,000* | *by Dale G. Stallings*

California plum growers, who produce over 90 percent of the commercial output of fresh plums in the United States, can reduce costs by critically evaluating their present packaging operations.

According to the Agricultural Marketing Service and the University of California, there is money

to be saved all along the plum packaging line in all plants by—

- Using cartons instead of crates,
- Bulk filling instead of place-packing;
- and in some plants by—
- Increasing the size of the packinghouse operation,
- And increasing the hours of operation per season.

In general, the larger the plant

and the longer the operating season, the more economical it is to mechanize packaging operations. At present, however, the many small plants in California and the rather short operating season sometimes justifies the use of hand-truck equipment rather than fork-lift trucks for inplant transportation. But in medium-size and large plants, conveyor equipment used with handtrucks offers a cheaper way to transport the fruit.

Through mechanization and other economies of increased volume, large plants can operate more inexpensively than small ones.

For example, assume a plant operates 300 hours a season, has a culling rate of 20 percent, uses standard crates, and place-packs its fruit. If this plant produces 200 crates an hour, the cost per crate, including container materials, would run close to 94 cents. But, were this plant to up its production to 700 crates an hour, per crate costs could be held to 85 cents—a savings of 9 cents apiece.

However, a further increase in production—to 1,200 crates an hour—would earn only slight additional savings, a little less than a cent a crate.

Now let's figure in the length of season, how it affects packaging costs.

In a plant turning out 500 crates an hour, operating 100 hours a season, the cost per crate amounts to \$1.16. The same plant operating 300 hours per season would have per crate costs of only 85 cents.

This savings of 31 cents per crate can be attributed to the spread of fixed costs over the greater volume of a longer operating season.

Often a plant can extend the number of hours it operates each season by packaging other commodities, such as grapes, pears, and peaches. In this way, the plum packer gets extra usage out of his equipment and buildings.

But, as with increasing the volume of a plant, increasing the op-

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erating season can only go so far in reducing packaging costs. Should a plant succeed in operating 500 hours a season there is little advantage in further extending the packing period.

The enterprising packer should also keep a watchful eye out for better packaging methods and improved containers. Bulk-fill packaging is less expensive than the place-pack method. A plant with 20 percent culls, operating 300 hours a season at the rate of 500 cartons an hour, can bulk-fill for about 64 cents per crate equivalent. If he uses the place-pack method, his costs—using cartons—run 74½ cents a crate equivalent.

The container, as well as the method of filling, is important in determining overall costs. A plant of 300-crates-per-hour capacity, operating 300 hours a season, can save 12 cents a crate equivalent by place-packing plums in fiberboard containers instead of standard crates. About 6½ cents of this savings is in container costs; labor and other costs are reduced 5½ cents.

If, under the same conditions, the plums are bulk-filled in a fiberboard container, a combined savings of 22.5 cents per crate equivalent may be realized. Applied to the average yearly volume of plums shipped out of the State, this savings would amount to more than \$1,000,000 a year.

Gains also can be made from the consolidation of several plants. The California plum packing industry could save \$180,000 annually by bringing individual operations together into larger plants, and gains from the increased hours of operation per season in these larger plants would amount to another \$160,000.

If these savings are added to those possible by a change in container and packaging methods, as much as \$1,400,000 could be saved annually by the industry—more than 30 cents on every crate of plums packed in California.

## *The Household Market for* **CANNED FRUITS AND VEGETABLES**

*by Kenneth E. Anderson and Russell L. Hawes*

**F**ARMERS' know-how and a dynamic marketing system have provided the American consumer with fresh, frozen, and canned fruits and vegetables the year-round. But, winter-time still offers the best marketing season for canned goods.

Just under 30 percent of all canned corn, snap beans, and peas are sold during January, February, and March. Canned fruits—peaches, pears, and fruit cocktail—also sell best during the winter and early spring.

Agricultural Marketing Service researchers recently probed into the household purchase patterns of these six fruits and vegetables. Their findings reveal a broad variety of data which, together, bring into sharp focus who buys what, when, and where.

These are the facts farmers, canners, and distributors need to know to market their products successfully and efficiently.

For example it's common knowledge that peaches are about the most popular canned fruit. But exactly who buys canned peaches? How much do they spend? Where do they live?

The household purchase study (which ran from July 1, 1958 through June 30, 1959) shows that 1 out of every 4 of the 51 million families in the U. S. buys canned peaches each month. These monthly purchases average about 2 cans per family.

Some people, of course, buy canned peaches more often; some less frequently. "Heavy buyers," however, take 70 percent of the household market; medium buyers, about 20 percent, and light buyers, the remainder.

The highest purchase rate is among families without children. These households use 3.6 cans per person per year with expenditures averaging \$1.19 per individual—compared to the national average of the equivalent of 2.5 No. 2½ cans and 81 cents.

Fruit cocktail, also a big seller among canned fruits, moves at an annual rate of slightly over 1 can per person, at a cost of 49 cents. Per capita expenditures for canned pears, on the other hand, amount to only 35 cents, and the national average is less than a can per person.

Peaches and pears sell best in the West, poorest in the South. Fruit cocktail finds its best customers in the Northeast, fewest in the West.

Similar data were uncovered for each of the three vegetables. The researchers found the average person buys a little more than 4 cans of sweet corn a year at an expenditure of 76 cents. He also buys 4 cans of peas for 70 cents and 3 cans of snap beans for 58 cents.

For all three vegetables purchase rates are lowest in the South and highest in the North Central and Northeastern States.

The authors are staff members of the Market Development Research Division, AMS. A full report, with purchase breakdowns for each of the fruits and vegetables will be published some time this month. A free copy may be obtained from the Office of Information, U. S. Department of Agriculture, Washington 25, D. C.

## Milk Market Administrator

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of milk according to its butterfat content, and handlers likewise are assured that all are paying on the same basis.

Many market administrators maintain their own laboratories to check on butterfat tests. In some cases, these services are performed for producers by their cooperative associations, but the market administrator is still responsible for the service to non-members.

He also is responsible for supplying producers with marketwide statistical information on receipts and sales. Most administrators issue a monthly bulletin containing this and other information.

Finally, the market administrator sees to it that the Federal milk orders are enforced. Either civil or criminal actions may be recommended, or both.

Handlers who question the validity of any requirement, however, may file a petition with the Secretary of Agriculture. He will appoint an examiner to conduct a hearing on the question. A recommended decision is then issued, and either party may file exceptions before a final decision is given by the Department's judicial officer. Handlers may appeal this decision to higher courts.

However, remarkably few cases go to the courts. This must be considered a tribute not only to the administrators who enforce Federal milk marketing orders, but to the staff of the AMS Dairy Division who design the orders and see that they are kept up-to-date.

The steady growth of the pro-

gram over the past 25 years attests to its popularity with farmers. There are now about 190,000 farmers annually delivering about 40 billion pounds of milk—worth about \$1.8 billion—in Federal order markets.

## Modern Trading Practices

*(continued from page 12)*

who administer the Act. Composed of leaders in the produce trade, this Conference Group has been particularly helpful in representing the many different phases of the complex industry and in developing regulations that would be of greatest benefit to all.

Specific recommendations revising the regulations were ready by last November, and the proposals were widely circulated throughout the produce industry. Everyone interested had a chance to look the proposals over and, if they wanted, to contribute their views on them.

Many marketing men took advantage of the invitation to comment, and all of their views and opinions were taken into consideration in framing the final regulations which went into effect August first.

The complete text of the revised PACA regulations has been assembled into a handy booklet for the convenience of members of the industry. To get a copy, write to the Fruit and Vegetable Division.

## Eggs for Breakfast

*(continued from page 3)*

substantial breakfast. And this, probably, is one reason why more people aren't eating eggs for breakfast.

About the same number of people eat eggs during the week as on weekends—62 percent compared to 60. But these percentages do not include exactly the same people.

Eggs don't seem to be too popular for noon or evening meals. One reason for *not* serving them is because the family often has had them for breakfast and wants something else for the other meals.

When eggs are served for lunch or dinner, they usually are scrambled or fried. More complicated egg dishes—omelets, egg salads—are served rather infrequently.

To most homemakers, eggs are mainly a breakfast food. Their concept of a "large or substantial" breakfast almost invariably includes eggs, usually two. A "medium" breakfast generally includes one egg. A "small or very light" breakfast has no eggs.

Interestingly enough, producers and marketing men concerned with other breakfast foods can benefit when families increase their consumption of eggs at breakfast time.

The study showed that cereals (hot and cold) do compete to some extent with eggs, but many individuals usually eat both for breakfast. More important, many do not eat either eggs or cereals.

Those whose usual breakfast includes eggs are very likely to eat meats and breads too. Those who omit eggs are much less inclined to have meats and breads for breakfast.

Selling homemakers on the idea of a good breakfast for everyone will not only sell more eggs but increase the demand for other farm products as well.